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Christina L. Vann

Appl No. : 09/692,494 Confirmation No. 6739
Applicant : Kristine B. Fuimaono, et al.
Filed : October 19, 2000
Title : IRRIGATION PROBE FOR ABLATION DURING
OPEN HEART SURGERY
TC/A.U. : 3763
Examiner : Cris Loiren Rodriguez
Docket No. : 39716/KMO/W112
Customer No. : 23363

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RESPONSE

Commissioner for Patents
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Commissioner:

In response to the Office action of April 21, 2003, Applicant submits the following remarks.

Claims 11, 12, 17, 18, 26, 27, 30 to 34 and 36 to 73 are pending in this application, of which claims 34, 42 and 64 are independent. In view of the remarks that follow, Applicant respectfully requests reconsideration and a timely indication of allowance.

Rejections Under 35 U.S.C. § 103(a)

The Examiner rejected claims 17, 18, 30 to 42, 47 to 51, 56 and 62 to 73 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Haissaguerre et al (US 6,068,629) in view of

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Swanson et al. (US 6,428,537). Applicant respectfully traverses this rejection.

In response to an Office action dated October 25, 2002, claims 34 and 42 were each amended to recite that both the first and second ends of the irrigation tube are fixedly attached to the distal end of the probe body. In the previous response,

{ Applicant argued that this limitation is not taught by Haissaguerre or Swanson. In the present Office action, the Examiner gives a verbatim rejection from the Office action of October 25, 2002, adding only that Haissaguerre discloses "[i]n figure 19A-B, it is set forth that arms 170,172 are allowed to pivot at a central living hinge at their connection 174 with shaft 6 (col. 13, lines 50-56). The step of opening the heart of the patient is found in col. 2, lines 43-47. In col. 10, lines 31-35 is disclosed other methods of access to the heart."

Applicant fails to see how the Examiner's language quoted above addresses Applicant's previous argument. As such, Applicant reiterates the argument presented in the previous Office action response:

Claims 34 and 42 each recite that both the first and second ends of the irrigation tube are fixedly attached to the distal end of the probe body. This limitation is taught neither by Haissaguerre nor by Swanson. Haissaguerre teaches a catheter for tissue mapping and ablation comprising two arms at the distal end, each arm carrying electrodes on its surface. The arms and the catheter form a generally Y-shape that allows the arms to provide increased and evenly

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distributed contact pressure across the entire length of an ablation location. (Col. 9, lines 15-32). Each arm comprises an outer sleeve 96 that defines an annular passage through which fluid flows from a fluid lumen in the catheter through holes in the arm. (Col. 9, lines 62-66; col. 10, lines 1-6). The Examiner seems to be suggesting each of these arms forms the claimed irrigation tube. However, Haissaguerre does not teach or suggest connecting the second (distal) ends of the arms to the catheter body, but instead describes the arms as each having a free end not connected to the catheter. Connecting the second (distal) ends of the arms to Haissaguerre's catheter would, in fact, undermine the ability of the arms to apply increased and evenly distributed pressure over the entire length of the arm, and thus would go against the teachings of Haissaguerre. Thus, nothing in Haissaguerre teaches or suggests that both the first and seconds ends of an irrigation tube are fixedly attached to the distal end of a probe body as presently claimed.

*not
claimed*

Swanson teaches catheters or probes and methods for treatment of atrial fibrillation in the heart, but does not make up for the deficiencies of Haissaguerre. Specifically, Swanson fails to even disclose an irrigation tube. Thus, nothing in Swanson teaches or suggests that both the first and seconds ends of an irrigation tube are fixedly attached to the distal end

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of a probe body. Accordingly, independent claims 34 and 42 are patentable over Haissaguerre and Swanson, and dependent claims 36 to 41 and 43 to 63 are similarly allowable over the two references.

Independent claim 64 was added in the Office action response dated January 27, 2003 and recites that no other components extend through the inner cavity formed by the irrigation tube that is attached to the distal end of the probe body. In the previous response, Applicant argued that this limitation is not taught by Haissaguerre or Swanson. In the present Office action, the Examiner makes no mention of this limitation being taught by either Haissaguerre or Swanson. As such, Applicant reiterates the argument presented in the previous Office action response:

Independent claim 64 recites that no other components extend through the inner cavity formed by the irrigation tube that is attached to the distal end of the probe body. This limitation is also not taught by Haissaguerre or Swanson. Haissaguerre teaches arm segments 34, 36 comprising a central mandrel core 94 attached at hinges 80,82, and outer sleeves 96 extending coaxially over the mandrel core. (Col. 9, lines 62-66). The core and outer sleeves define an annular fluid passage 98 therebetween. Haissaguerre does not teach or suggest attaching the arm segments 34, 36 to the distal end of the catheter body other than by a mandrel core. In addition to the core,

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individual insulated wires 90, 92 also extend through the annular fluid passage. (Fig. 12). These components are all important for Haissaguerre's catheter. Thus, nothing in Haissaguerre teaches or suggests that no other components extend through the inner cavity formed by the irrigation tube that is attached to the distal end of the probe body.

Swanson, as described above, fails to even a disclose an irrigation tube. Thus, nothing in Swanson teaches or suggests that no other components extend through the inner cavity formed by the irrigation tube that is attached to the distal end of the probe body. Accordingly, independent claim 64 is patentable over Haissaguerre and Swanson, and dependent claims 65 to 73 are similarly allowable over the two references.

At page 4 of the Office action, the Examiner states that "[i]n response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references." Applicant respectfully submits that the above argument does not merely attack the references individually, but addresses their combination. Notably, Applicant discusses the deficiencies of Haissaguerre and then addresses why Swanson does not remedy these deficiencies. Accordingly, this basis by the Examiner for rejecting Applicant's argument is not applicable.

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Applicant respectfully requests that the rejection under section 103(a) be withdrawn. If the Examiner continues to maintain the rejection over Haissaguerre and Swanson, Applicant requests that she address Applicant's specific arguments so that Applicant can better respond to the rejection in the future.

In view of the foregoing amendments and remarks, Applicant respectfully submits that all of pending claims 11, 12, 17, 18, 26, 27, 30 to 34 and 36 to 73 are in condition for allowance, and a timely indication of allowance is respectfully requested. If there are any remaining issues that can be addressed by telephone, Applicant invites the Examiner to contact the undersigned at the number indicated below.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

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